

Patent claims

1. A door module (2) for a vehicle door, which is divided in a sealed manner into an outer wet door chamber (44), facing the door shell (1), and an inner dry door chamber (43), with mechanical and/or electrical functional components that are secured in a preassembled manner on the door module in the dry door chamber and can be mechanically and/or electrically connected to door components arranged in the wet door chamber, the seal between the dry door chamber and the wet door chamber being formed by a separating sheet (12) which is penetrated in a sealed manner by the connecting means of the functional components secured on the door module on the near side of the separating sheet, characterized in that the interior decorative trim (3) of the door module (2) and/or a reinforcing element (20) arranged on it have contact pressure zones which preferably extend over the whole periphery of the door module and onto which the separating sheet (12) can be pressed in a sealing manner by contact with the door shell (1).
2. The door module as claimed in claim 1, characterized in that the functional components and/or the connecting means are at least partly arranged directly on the flat side of an interior decorative trim (3) of the door module (2) that is facing the dry chamber (43).
3. The door module as claimed in claim 2, characterized in that the functional components and/or the connecting means are at least partly arranged on a reinforcing element (20), which for its part can be connected to the interior decorative trim (3) of the door module (2).

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4. The door module as claimed in one of the preceding claims, characterized in that the door module (2) can be engaged in a latching manner with the door shell (1) in the Y direction while forming the mechanical and/or electrical connection between the functional components and the door components.
5. The door module as claimed in one of the preceding claims, characterized in that the separating sheet (12) is preassembled on the door module (2) and can be fitted together with the latter on the door shell (1).
6. The door module as claimed in one of the preceding claims, characterized in that the contact pressure zone comprises rib-like projections (46) extending outward, from the interior decorative trim (3) and/or the reinforcing element (20).
7. The door module as claimed in claim 6, characterized in that the contact pressure zone has two rib-like projections (46.1), (46.2), onto which the separating sheet (12) can be pressed, if appropriate while a sealant (47) is introduced into the spacing between them.
8. The door module as claimed in claim 7, characterized in that the sealant (47) is arranged on the far side of the rib-like projections (46.1), (46.2) on the separating sheet (12) and can be brought into contact with the inner door panel (33) during the assembly of the door module (2).
9. The door module as claimed in claim 8, characterized in that the sealant (47) comprises a bead of sealant (48) which, before the assembly of the door module (2), can be covered with a peel-off protective film.

10. The door module as claimed in one of the preceding claims, characterized in that the separating sheet (12) comprises at least one layer (50.1) of a closed-cell plastic foam, in particular of a polyolefin, preferably of polyethylene.
11. The door module as claimed in one of the preceding claims, characterized in that the separating sheet (12) is formed with at least two layers, the layer (50.2) facing the dry door chamber (43) consisting of an open-cell plastic foam, in particular of a polyolefin, preferably of polyethylene.
12. The door module as claimed in one of the preceding claims, characterized in that one of the functional elements in the dry door chamber (43) is formed as an electrical drive (21) of a window lifter, preferably including a control system and an operating device, which is fastened to the interior decorative trim (3) and/or a reinforcing element (20) connected to the latter and the driven shaft (14) of which penetrates through the separating sheet in the Y direction in a sealed manner but rotatably.
13. A vehicle door with a door module (2) as claimed in one of the preceding claims.
14. The vehicle door as claimed in claim 13, characterized in that the inner door panel (33) of the door shell (1) has a large-area cutout (34) extending over a significant part of the inner door panel.
15. The vehicle door as claimed in claim 14, characterized in that the surface area of the cutout (34) is at least 50%, preferably

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approximately 70%, of the region of the inner door panel (33) that is covered by the door module (2).

16. The vehicle door as claimed in claim 14 or 15,
5 characterized in that the cutout (34) is free from struts running in its cross section.